WHAT IS CLAIMED IS:

1. A method of designing a golf club head by using a computer, comprising the steps of:

using a club head model and a ball model both of which are composed of a plurality of divided finite elements;

executing a simulation of impacting said club head model against said ball model at a reference hitting position set in a sweet area of a face part of said club head model and a plurality of comparison hitting positions set outside said sweet area;

computing a stress generated in each of said finite elements by an analysis based on a finite element method, when said club head model impacts said ball model at said reference hitting position and said comparison hitting positions; and

controlling a thickness distribution of each of said finite elements, based on a difference in a value of a stress generated at said reference hitting position and a value of a stress generated at each of said comparison hitting positions; and approximating a value of said stress generated when said ball model is hit outside said sweet area to a value of said stress generated when said ball model is hit inside said sweet area,

whereby said stress generated at said reference hitting position and said stresses generated at said comparison hitting positions are made uniform.

2. The method according to claim 1, wherein said club head model consists of a wood club head model;

a control of said thickness distribution of each of said finite elements is executed by controlling a thickness of a metal plate composing said face part of said wood club head model;

said stress generated at each of said comparison hitting positions is compared with said stress generated at said reference hitting position;

if said stresses generated at said comparison hitting positions are larger than said stress generated at said reference hitting position, portions of said metal plate disposed at said comparison hitting positions are thickened, whereas if said stresses generated at said comparison hitting positions are smaller than said stress generated at said reference hitting position, portions of said metal plate disposed at said comparison hitting positions are thinned, whereby said stresses generated at said comparison hitting positions are approximated to said stress generated at said reference hitting position.

3. The method according to claim 1, wherein a Mises' stress generated in each of said elements when said ball model is hit with said club head model is computed from a main stress value at an integration point of each of said elements; and a maximum value of said Mises' stress at each of said hitting positions is computed from a change of a time series of said found Mises' stress, and

a part of said face part disposed at said comparison hitting position generating a smaller maximum value of said Mises' stress than a maximum value of said Mises' stress at said reference hitting

position is thinned, whereas a portion of said face part disposed at said comparison hitting position generating a larger maximum value of said Mises' stress than said maximum value of said Mises' stress at said reference hitting position is thickened.

4. The method according to claim 2, wherein a Mises' stress generated in each of said elements when said ball model is hit with said club head model is computed from a main stress value at an integration point of each of said elements; and a maximum value of said Mises' stress at each of said hitting positions is computed from a change of a time series of said found Mises' stress, and

a part of said face part disposed at said comparison hitting position generating a smaller maximum value of said Mises' stress than a maximum value of said Mises' stress at said reference hitting position is thinned, whereas a portion of said face part disposed at said comparison hitting position generating a larger maximum value of said Mises' stress than said maximum value of said Mises' stress at said reference hitting position is thickened.

5. The method according to claim 3, wherein when said ball model is hit with said club head model at an initial speed of 40m/second, a maximum value of said Mises' stress generated at said reference hitting position and a maximum value of said Mises' stress generated at said comparison hitting positions is computed,

a thickness of said element disposed at said comparison hitting position is altered so that a difference between said maximum value of the Mises' stress generated at said reference hitting position

and said maximum value of the Mises' stress generated at said comparison hitting positions is not more than 8 kgf/mm^2; and a simulation of impacting said club head model against said ball model is repeatedly executed to decide said thickness distribution.

6. The method according to claim 4, wherein when said ball model is hit with said club head model at an initial speed of 40m/second, a maximum value of said Mises' stress generated at said reference hitting position and a maximum value of said Mises' stress generated at said comparison hitting positions is computed,

a thickness of said element disposed at said comparison hitting position is altered so that a difference between said maximum value of the Mises' stress generated at said reference hitting position and said maximum value of the Mises' stress generated at said comparison hitting positions is not more than 8 kgf/mm^2; and a simulation of impacting said club head model against said ball model is repeatedly executed to decide said thickness distribution.

7. The method according to claim 1, wherein said reference hitting position is located inside a sweet area of said face part, and said comparison hitting position is formed at not less than three points outside said sweet area; and said reference hitting position is located in a region surrounded with straight lines connecting said comparison hitting positions.

8. The method according to claim 2, wherein said reference hitting position is located inside a sweet area of said face part, and said comparison hitting position is formed at not less than

three points outside said sweet area; and said reference hitting position is located in a region surrounded with straight lines connecting said comparison hitting positions.

9. The method according to claim 3, wherein said reference hitting position is located inside a sweet area of said face part, and said comparison hitting position is formed at not less than three points outside said sweet area; and said reference hitting position is located in a region surrounded with straight lines connecting said comparison hitting positions.

10. The method according to claim 4, wherein said reference hitting position is located inside a sweet area of said face part, and said comparison hitting position is formed at not less than three points outside said sweet area; and said reference hitting position is located in a region surrounded with straight lines connecting said comparison hitting positions.

11. A method according to claim 1, wherein said comparison hitting position is formed at two points, with one point disposed upward from said reference hitting position and the other point disposed downward therefrom, and at two points with one point disposed at a left-hand side of said reference hitting position and the other point disposed at a right-hand side thereof.

12. A method according to claim 2, wherein said comparison hitting position is formed at two points, with one point disposed upward from said reference hitting position and the other point disposed downward therefrom, and at two points with one point disposed

at a left-hand side of said reference hitting position and the other point disposed at a right-hand side thereof.

13. A method according to claim 3, wherein said comparison hitting position is formed at two points, with one point disposed upward from said reference hitting position and the other point disposed downward therefrom, and at two points with one point disposed at a left-hand side of said reference hitting position and the other point disposed at a right-hand side thereof.

14. A method according to claim 4, wherein said comparison hitting position is formed at two points, with one point disposed upward from said reference hitting position and the other point disposed downward therefrom, and at two points with one point disposed at a left-hand side of said reference hitting position and the other point disposed at a right-hand side thereof.

15. A method according to claim 5, wherein said comparison hitting position is formed at two points, with one point disposed upward from said reference hitting position and the other point disposed downward therefrom, and at two points with one point disposed at a left-hand side of said reference hitting position and the other point disposed at a right-hand side thereof.